

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) An aircraft fuel tank system comprising:

at least one aircraft fuel tank;

an air separation means for producing nitrogen-enriched air, and control means operable to control said air separation means to supply nitrogen-enriched air into said at least one aircraft fuel tank during cruise conditions and to supply ~~to supply~~ nitrogen-enriched air at a higher flow rate during descent, whereby substantially the whole of the mass of gas required to maintain the pressure difference across the walls of the fuel tank below a design threshold is provided by said air separation means.

2. (currently amended) The ~~An~~ aircraft fuel tank system as claimed in Claim 1, wherein said control means controls the air separation means such that the whole of the mass of gas required to maintain said pressure difference is provided by said air separation ~~device~~ means.

3. (currently amended) The ~~An~~—aircraft fuel tank system as claimed in Claim 2, wherein said air separation means in use provides nitrogen-enriched air having a ~~relatively~~ high concentration of nitrogen at ~~relatively~~ low mass flow rates, ~~with the~~ and a low concentration of nitrogen being lower at higher mass flow rates.

4. (currently amended) The ~~An~~—aircraft fuel tank system as claimed in claim 1, including means for distributing the nitrogen-enriched air at a number of spaced locations in said at least one aircraft fuel tank, thereby in use to reduce variations in concentration of nitrogen within said tank.

5. (currently amended) The ~~An~~—aircraft fuel tank system as claimed in claim 1, wherein said air separation means comprises a Hollow Fibre Membrane.

6. (currently amended) An aircraft fuel tank system comprising:

at least one aircraft fuel tank;
means for providing nitrogen-enriched air for delivery into said at least one tank, and means for distributing said nitrogen-enriched air at a number of spaced locations within said at least one tank.

7. (currently amended) The ~~An~~ aircraft fuel system as claimed in Claim 6, wherein said substantially the entire amount of nitrogen-enriched air is drawn from said providing means.

8. (currently amended) A method of inserting at least one aircraft fuel tank which comprises operating an air separation device during cruise conditions to deliver nitrogen-enriched air with a ~~relatively~~ high concentration of nitrogen at a ~~relatively~~ low mass flow rate into said aircraft fuel tank, and operating said air separation device during descent conditions to deliver nitrogen-enriched air with a lower concentration of nitrogen and at a ~~relatively~~ high mass flow rate, whereby the air-separation device provides ~~substantially~~ the whole of the mass of gas required to maintain the pressure difference across the walls of the or each fuel tank below a design threshold.

9. (currently amended) The ~~An~~ aircraft fuel tank system as claimed in claim 2, including means for distributing the nitrogen-enriched air at a number of spaced locations in said at least one aircraft fuel tank, thereby in use to reduce variations in concentration of nitrogen within said tank.

10. (currently amended) The An—aircraft fuel tank system as claimed in claim 3, including means for distributing the nitrogen-enriched air at a number of spaced locations in said at least one aircraft fuel tank, thereby in use to reduce variations in concentration of nitrogen within said tank.

11. (currently amended) The An—aircraft fuel tank system as claimed in claim 2, wherein said air separation means comprises a Hollow Fibre Membrane.

12. (currently amended) The An—aircraft fuel tank system as claimed in claim 3, wherein said air separation means comprises a Hollow Fibre Membrane.

13. (currently amended) The An—aircraft fuel tank system as claimed in claim 4, wherein said air separation means comprises a Hollow Fibre Membrane.